

**WHAT IS CLAIMED IS:**

1. A method of designing a layout of an integrated circuit, comprising the steps of:  
first placing a plurality of logic cells in an initial region of the integrated circuit  
using a first placement algorithm;  
5 partitioning the initial region into two or more partitioned regions; and  
second placing a portion of the logic cells in at least one of the partitioned regions  
using a second placement algorithm which is different from the first  
placement algorithm.
2. The method of Claim 1 wherein the first and second placement algorithms are  
quadratic placement algorithms.
3. The method of Claim 2 wherein one of the first or second placement algorithms  
is a conjugate gradient placement algorithm.
4. The method of Claim 2 wherein one of the first or second placement algorithms  
is a successive over-relaxation placement algorithm.
5. The method of Claim 2 wherein:  
the first placement algorithm is a conjugate gradient placement algorithm; and  
the second placement algorithm is a successive over-relaxation placement  
algorithm.

6. The method of Claim 1 further comprising the steps of:  
second partitioning one of the partitioned regions into two or more partitioned  
sub-regions; and  
third placing a portion of the logic cells in at least one of the partitioned sub-  
5 regions using a third placement algorithm which is different from the first  
and second placement algorithms.

7. The method of Claim 1 wherein the first placement algorithm is more  
computationally efficient than the second placement algorithm.

8. A computer system comprising:

means for processing program instructions;

a memory device connected to said processing means; and

program instructions residing in said memory device for designing a layout of an

5 integrated circuit, wherein said program instructions first place a plurality  
of logic cells in an initial region of the integrated circuit using a first  
placement algorithm, partition the initial region into two or more  
partitioned regions, and second place a portion of the logic cells in at least  
one of the partitioned regions using a second placement algorithm which  
10 is different from the first placement algorithm.

9. The computer system of Claim 8 wherein the first and second placement  
algorithms are quadratic placement algorithms.

10. The computer system of Claim 9 wherein one of the first or second placement  
algorithms is a conjugate gradient placement algorithm.

11. The computer system of Claim 9 wherein one of the first or second placement  
algorithms is a successive over-relaxation placement algorithm.

12. The computer system of Claim 9 wherein:

the first placement algorithm is a conjugate gradient placement algorithm; and

the second placement algorithm is a successive over-relaxation placement  
algorithm.

13. The computer system of Claim 8 wherein said program instructions further  
second partition one of the partitioned regions into two or more partitioned sub-regions,  
and third place a portion of the logic cells in at least one of the partitioned sub-regions  
using a third placement algorithm which is different from the first and second placement  
5 algorithms.

14. The computer system of Claim 8 wherein the first placement algorithm is  
more computationally efficient than the second placement algorithm.

15. A computer program product comprising:  
a computer-readable medium; and  
program instructions residing in said medium for designing a layout of an  
integrated circuit, wherein said program instructions first place a plurality  
of logic cells in an initial region of the integrated circuit using a first  
placement algorithm, partition the initial region into two or more  
partitioned regions, and second place a portion of the logic cells in at least  
one of the partitioned regions using a second placement algorithm which  
is different from the first placement algorithm.
16. The computer program product of Claim 15 wherein the first and second  
placement algorithms are quadratic placement algorithms.
17. The computer program product of Claim 16 wherein one of the first or second  
placement algorithms is a conjugate gradient placement algorithm.
18. The computer program product of Claim 16 wherein one of the first or second  
placement algorithms is a successive over-relaxation placement algorithm.
19. The computer program product of Claim 16 wherein:  
the first placement algorithm is a conjugate gradient placement algorithm; and  
the second placement algorithm is a successive over-relaxation placement  
algorithm.
20. The computer program product of Claim 15 wherein said program instructions  
further second partition one of the partitioned regions into two or more partitioned sub-  
regions, and third place a portion of the logic cells in at least one of the partitioned sub-  
regions using a third placement algorithm which is different from the first and second  
placement algorithms.

21. The computer program product of Claim 15 wherein the first placement algorithm is more computationally efficient than the second placement algorithm.